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Patent Claims:
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1. A method of detecting a sequence of information
5   symbols from a first signal subjected to inter-symbol
     interference, wherein each symbol can adopt one of a
     number of different values, said method being performed
     as one or more signal processing paths, and wherein the
     following steps are performed repetitively:

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     setting, in each of said one or more signal processing
     paths, a symbol in the sequence to a value based on an
     intermediate signal derived from said first signal and a
     feedback signal generated on the basis of one or more
15   previously set symbols,

     dividing a signal processing path, in which said
     intermediate signal for a given symbol exceeds a given
     threshold, into two separate signal processing paths,
20   setting said given symbol to different values in each of
     said two separate signal processing paths, and

     selecting, after setting a number of symbols, the
     sequence of information symbols from one of said one or
25   more signal processing paths as the detected sequence of
     information symbols,

     c h a r a c t e r i z e d   in that

30   said method further comprises the step of adjusting said
     given threshold in accordance with an estimate of noise
     in said intermediate signal.

     2.   A   method   according   to   claim   1,
35   c h a r a c t e r i z e d   in   that   said   noise   is

estimated by use of a known sequence of symbols in said first signal.

3. A method according to claim 2, **c h a r a c t e r i z e d** in that, when said first signal includes a number of blocks of information symbols including a known sequence of symbols, said estimate of said noise is performed continuously.

4. A method according to claim 2 or 3, **c h a r a c t e r i z e d** in that said noise is estimated as the mean error distance between a known sequence of symbols and the corresponding symbols of said intermediate signal multiplied by a given factor.

5. A method according to one or more of claims 1-4, **c h a r a c t e r i z e d** in that a given signal processing path is cancelled when the metric thereof is larger than the metric of another given signal processing path and a given number of corresponding previously set symbols in said given and said another given signal processing are equal.

6. A method according to one or more of claims 1-4, **c h a r a c t e r i z e d** in that a given signal processing path is cancelled when the metric of the given signal processing path exceeds the metric of at least one of all other signal processing paths by a given predefined amount.

7. A mobile station adapted to detect a sequence of information symbols from a first signal subjected to inter-symbol interference, wherein each symbol can adopt one of a number of different values, said mobile station being adapted to said detection as one or more signal processing paths, and said mobile including:

setting means adapted to setting, in each of said one or more signal processing paths, each symbol in the sequence to a value based on an intermediate signal derived from said first signal and a feedback signal generated on the basis of one or more previously set symbols,

dividing means adapted to divide a signal processing path, in which said intermediate signal for a given symbol exceeds a given threshold, into two separate signal processing paths, whereby said given symbol is set to different values in each of said two separate signal processing paths, and

selecting means adapted to selecting, after setting a number of symbols, the sequence of information symbols from one of said one or more signal processing paths as the detected sequence of information symbols,

c h a r a c t e r i z e d in that

said mobile station further comprises adjusting means adapted to adjust said given threshold in accordance with an estimate of noise in said intermediate signal.

8.   A mobile station according to claim 7, c h a r a c t e r i z e d in that said adjusting means is adapted to estimate said noise using a known sequence of symbols in said first signal.

9.   A mobile station according to claim 8, c h a r a c t e r i z e d in that, when said first signal includes a number of blocks of information symbols including a known sequence of symbols, said adjusting means is adapted to perform said estimation of said noise continuously.

10. A mobile station according to claim 8 or 9, c h a r a c t e r i z e d in that said adjusting means is adapted to estimate said noise as the mean error
5 distance between a known sequence of symbols and the corresponding symbols of said intermediate signal multiplied by a given factor.

11. A mobile station according to claims 7-10,
10 c h a r a c t e r i z e d in that said selecting means is further adapted to cancel a given signal processing path, when the metric thereof is larger than the metric of another given signal processing path, and a given number of corresponding previously set symbols in said
15 given and said another given signal processing are equal.

12. A mobile station according to claims 7-10, c h a r a c t e r i z e d in that said selecting means is further adapted to cancel a given signal processing
20 path when the metric of the given signal processing path exceeds the metric of at least one of all other signal processing path by a given predefined amount.